

REMARKS

Claims 20, 22 and 24-29 are pending in this application. The final rejection of these claims is addressed in an Appeal Brief being submitted with this Amendment.

Claim 28 is amended herein to present this rejected claim in a better form for appeal. Consideration and admittance of the amendment to claim 28 pursuant to 37 C.F.R. §1.116, is respectfully requested.

Claim 28 stands rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the Examiner asserts the claim comprises contradictory requirements. The Examiner points out that in lines 13-14 of the claim it is written that "...upon application of heat treatment to the device causing the bumps of the first and second bump units to melt, the bumps of the first bump unit remain apart from each other...", while in lines 16-18 it is written "...wherein the bumps of the first bump unit are sufficiently close to each other that upon application of the heat treatment to the device, the bumps of the first bump unit fuse into a unitary body."

It is clear from the specification of the present application that the quoted language from lines 13-14 should read "... upon application heat treatment to the to the

device causing the bumps on the first and second bump units to melt, the bumps of the second bump unit remain apart from each other..." As claim 28 recites in lines 9-10, "... a second bump unit formed in the peripheral area of the back surface for transmitting signals..." And as disclosed in the specification at page 5, lines 13-15, "... the connection solder bumps 14 are located with a predetermined pitch or distance so that the adjacent connection bumps 14 should not join each other by the heat treatment..." It is respectfully submitted that the bumps of the second bump unit recited in claim 28 correspond to the connection solder bumps 14 disclosed in the specification and, accordingly, should not join each other as a result of the heat treatment.


The language of claim 28 is corrected herein so that it agrees with the specification, and properly reflects the invention as disclosed. Inasmuch as the amendment presents claim 28 in a better form for consideration on appeal, it is respectfully requested that any §112, second paragraph, rejection be withdrawn and this Amendment be admitted.

The Appendix to this Amendment shows the changes to claim 28 with deletions indicated by brackets and additions by underlining.

If any extension of time is required in connection with the submission of this Amendment, please charge any associated fee to deposit account No. 18-0002, and send a notification accordingly.

Respectfully submitted,

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APPENDIX

AMENDED CLAIMS

(Deletions shown by bracketing and additions by underlining)

28. (Amended) A semiconductor device, comprising:

a substrate having a main surface and a back surface, the back surface having a central area, an intermediate area surrounding the central area and a peripheral area surrounding the intermediate area;

a semiconductor chip disposed on the main surface;

a first bump unit disposed in the central area of the back surface to radiate heat from the semiconductor device, the first bump unit including a plurality of bumps disposed a first distance apart from each other; and

a second bump unit formed in the peripheral area of the back surface for transmitting signals, the second bump unit including a plurality of bumps disposed a second distance apart from each other sufficient to assure that upon application of a heat treatment to the device causing the bumps of the first and second bump units to melt, the bumps of the [first] second bump unit remain apart from each other, the second distance being greater than the first distance and less than a third distance between the central area and the peripheral area,

wherein the bumps of the first bump unit are sufficiently close to each other that upon the application of

the heat treatment to the device, the bumps of the first bump unit fuse into a unitary body.